The MicroBooNE experiment seeks to explain the low-energy excess of electron-like events seen by its predecessor, MiniBooNE, and will explore other short-baseline neutrino phenomena. It consists of a 170 ton Liquid Argon (LAr) time-projection chamber that will detect neutrinos from the Booster neutrino beam-line. It will also serve as a step towards building kiloton scale LAr detectors such as the far detector for LBNE and make cross section measurements on Ar crucial to future LAr based experiments. The detector commissioning process will include validation of the detector behavior and calibration of event reconstruction using well understood cosmic-ray muon measurements. By using an external cosmic-ray trigger system, muons that either cross or stop in the detector can be collected and studied. As a new member of the MicroBooNE collaboration, I will participate in the detector commissioning and calibration and integrate with the team commissioning the external cosmic-ray trigger system during my fellowship in order to develop analysis software to simulate and analyze data from the system.